

Figure 1.

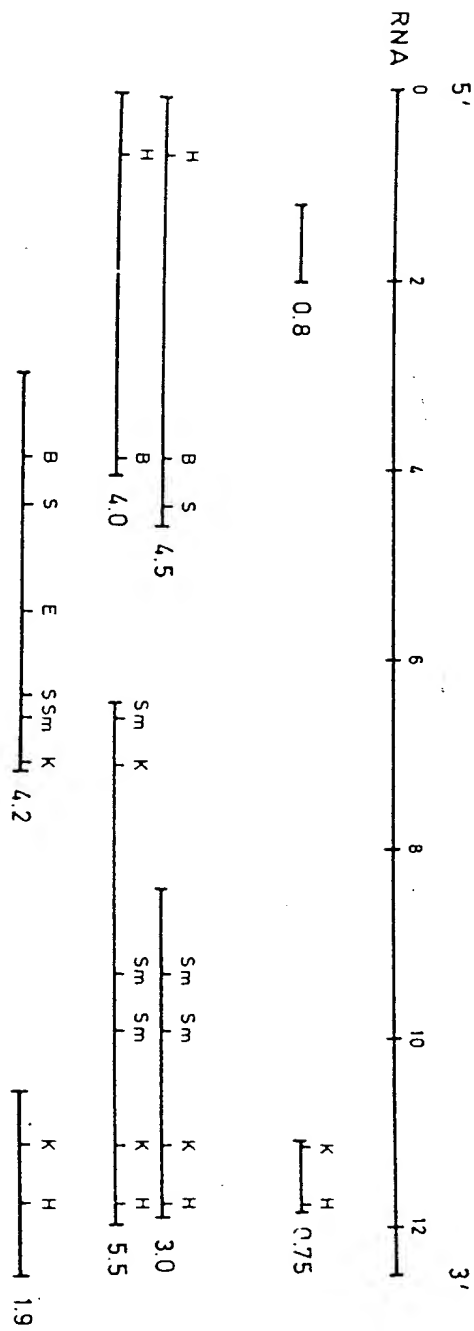


Figure 2.

1 GTT AGC TCT TTC TCG TAT ACG ATA TTG GAT ACA CTA AAT TTC GAT TTG GTC TAG GGC ACC CCT CCA GCG ACG GCC GAA ATG GGC 84  
 85 TAG CCA TGC CCA TAG TAG GAC TAG CAA ACG GAG GGA CTA GCC GTA GTG GCG AGC TCC CTG GGT GGT CTA AGT CCT GAG TAC AGG 168  
 169 ACA GTC GTC AGT AGT TCG ACG TGA GCA CTA GCC CAC CTC GAG ATG CTA CGT GGA CGA GGG CAT GCC CAA GAC ACA CCT TAA CCC 252  
 253 TGG CGG GGG TCG CTA GGG TGA AAT CAC ATT ATG TGA TGG GGG TAC GAC CTG ATA GGG TGC TGC AGA GGC CCA CTA GCA GGC TAG 336  
 337 TAT AAA AAT CTC TGC TGT ACA TGG CAC ATG GAG TTG AAT CAT TTT GAA TTA TTA TAC AAA ACA AGC AAA CAA AAA CCA CTG GGA 420  
 1 Met Glu Leu Asn His Phe Glu Leu Leu Tyr Lys Thr Ser Lys Gln Lys Pro Val Gly 19  
 421 GTG GAG GAA CCG GTG TAT GAC ACC GCG GGG AGA CCA CTA TTT GGG AAC CCA AGT GAG GTA CAC CCA CAA TCA ACG CTG AAG CTG 504  
 20 Val Glu Glu Pro Val Tyr Asp Thr Ala Gly Arg Pro Leu Phe Gly Asn Pro Ser Glu Val His Pro Gln Ser Thr Leu Lys Leu 47  
 505 CCA CAC GAC AGG GGG AGA GGA GAT ATC AGA ACA ACA CTG AGG GAC CTA CCC AGG AAA GGT GAC TGT AGG AGT GGC AAC CAT CTA 588  
 48 Pro His Asp Arg Gly Arg Gly Asp Ile Arg Thr Thr Leu Arg Asp Leu Pro Arg Lys Gly Asp Cys Arg Ser Gly Asn His Leu 75  
 589 GGC CCG GTT AGT GGG ATA TAC ATA AAG CCC GGC CCT GTC TAC TAT CAG GAC TAC ACG GGC CCA GTC TAT CAC AGA GCT CCT TTA 672  
 76 Gly Pro Val Ser Gly Ile Tyr Ile Lys Pro Gly Pro Val Tyr Tyr Gln Asp Tyr Thr Gly Pro Val Tyr His Arg Ala Pro Leu 103  
 673 GAG TTC TTT GAT GAG GCC CAG TTC TGC GAG GTG ACT AAG AGA ATA GGC AGG GTC ACG GGT AGT GAT GGT AAG CTT TAC CAC ATA 756  
 104 Glu Phe Phe Asp Glu Ala Gln Phe Cys Glu Val Thr Lys Arg Ile Gly Arg Val Thr Gly Ser Asp Gly Lys Leu Tyr His Ile 131  
 757 TAT GTG TGC GAT GGT TGC ATA CTG CTG AAA TTA GCC AAA AGG GGC ACA CCC AGA ACC CTA AAG TGG ATT AGG AAC TTC ACC 840  
 132 Tyr Val Cys Val Asp Gly Cys Ile Leu Leu Lys Leu Ala Lys Arg Gly Thr Pro Arg Thr Leu Lys Trp Ile Arg Asn Phe Thr 159  
 841 AAC TGT CCA TTA TGG GTA ACC AGT TGC TCC GAT GAC GGC CCA AGT GGC AGC AAG GAT AAG AAG CCA GAC AGA ATG AAC AAA GGT 924  
 160 Asn Cys Pro Leu Trp Val Thr Ser Cys Ser Asp Asp Gly Ala Ser Gly Ser Lys Asp Lys Lys Pro Asp Arg Met Asn Lys Gly 167  
 925 AAG TTG AAG ATA GCC CCA AGA GAG CAT GAG AAG GAC AGC AAG ACC AAG CCT CCT GAT CCA ACG ATT GTA GTA GAG GGA GTA AAA 1008  
 188 Lys Leu Lys Ile Ala Pro Arg Glu His Glu Lys Asp Ser Lys Thr Lys Pro Pro Asp Ala Thr Ile Val Val Glu Gly Val Lys 215  
 1009 TAC CAA ATC AAA AAG AAA GGC AAA GTC AAA GGG AAG AAC ACA CAA GAC GGC CTG TAC CAT AAT AAG AAC AAG CCA CCA GAG TCC 1092  
 216 Tyr Gln Ile Lys Lys Lys Gly Lys Val Lys Gly Lys Asn Thr Gln Asp Gly Leu Tyr His Asn Lys Asn Lys Pro Pro Glu Ser 243

1093 AGG AAG AAA CTA GAA AAA GCC CTG TTG GCT TGG GCG GTG ATA ACA ATC TTG CTG TAC CAG CCT GTA GCA GCC GAG AAC ATA ACT 1176  
244 Arg Lys Lys Leu Glu Lys Ala Leu Leu Ala Trp Ala Val Ile Thr Ile Leu Leu Tyr Gln Pro Val Ala Ala Glu Asn Ile Thr 271  
  
1177 CAA TGG AAC CTG AGT GAC AAC GGC ACT AAT GGT ATT CAG CGA GCC ATG TAT CTT AGA GGG GTT AAC AGG AGC TTA CAT GGG ATC 1260  
272 Gln Trp Asn Leu Ser Asp Asn Gly Thr Asn Gly Ile Gln Arg Ala Met Tyr Leu Arg Gly Val Asn Arg Ser Leu His Gly Ile 299  
  
1261 TGG CCC GAG AAA ATA TGC AAG GGG GTC CCC ACT CAT CTG GCC ACT GAC ACG GAA CTG AAA GAG ATA CGC GGG ATG ATG GAT GCC 1344  
300 Trp Pro Glu Lys Ile Cys Lys Gly Val Pro Thr His Leu Ala Thr Asp Thr Glu Leu Lys Glu Ile Arg Gly Met Met Asp Ala 327  
  
1345 AGC GAG AGG ACA AAC TAT ACG TGC TGT AGG TTA CAA AGA CAT GAA TGG AAC AAA CAT GGA TGG TGT AAC TGG TAC AAC ATA GAC 1428  
328 Ser Glu Arg Thr Asn Tyr Thr Cys Cys Arg Leu Glu Arg His Glu Trp Asn Lys His Gly Trp Cys Asn Trp Tyr Asn Ile Asp 355  
  
1429 CCT TGG ATT CAG TTA ATG AAC AGG ACC CAA ACA AAT TTG ACA GAA GGC CCT CCA GAT AAG GAG TGT GCC GTG ACC TGC AGG TAT 1512  
356 Pro Trp Ile Gln Leu Met Asn Arg Thr Gln Thr Asn Leu Thr Glu Gly Pro Pro Asp Lys Glu Cys Ala Val Thr Cys Arg Tyr 383  
  
1513 GAC AAA AAT ACC GAT GTC AAC GTG GTC ACC CAG GCC AGG AAT AGG CCA ACT ACT CTG ACT GGC TGC AAG AAA GGG AAA AAC TTT 1596  
384 Lys Asn Thr Asp Val Asn Val Val Thr Gln Ala Arg Asn Arg Pro Thr Thr Leu Thr Gly Cys Lys Lys Gly Lys Asn Phe 411  
Ala  
  
1597 TCA TTC GCA GGC ACA GTC ATA GAG GGC CCG TGC AAT TTC AAC GTT TCC GTG GAG GAC ATC TTA TAC GGA GAC CAT GAG TGT GGC 1680  
412 Ser Phe Ala Gly Thr Val Ile Glu Gly Pro Cys Asn Phe Asn Val Ser Val Glu Asp Ile Leu Tyr Gly Asp His Glu Cys Gly 439  
  
1681 AGT CTG CTC CAG GAC ACG GCT CTG TAC CTA TTG GAT GGA ATG ACC AAC ACT ATA GAG AAT GCC AGG CAA GGT GCG GCG GTG 1764  
440 Ser Leu Leu Gln Asp Thr Ala Leu Tyr Leu Leu Asp Gly Met Thr Asn Thr Ile Glu Asn Ala Arg Gln Gly Ala Ala Arg Val 467  
  
1765 ACA TCT TGG CTT GGG AGG CAG CTC AGT ACC GCA GGG AAG AAG CTA GAG AGG AGA AGC AAA ACC TGG TTT GGT GCC TAT GCC CTG 1848  
468 Thr Ser Trp Leu Gly Arg Gln Leu Ser Thr Ala Gly Lys Leu Glu Arg Ser Lys Thr Trp Phe Gly Ala Tyr Ala Leu 495  
  
1849 TCA CCT TAC TGC AAT GTG ACT AGA AAA ATA GGG TAC ATA TGG TAT ACA AAC AAC TGC ACC CCG GCA TGC CTC CCT AAG AAC ACA 1932  
496 Ser Pro Tyr Cys Asn Val Thr Arg Lys Ile Gly Tyr Ile Trp Tyr Thr Asn Asn Cys Thr Pro Ala Cys Leu Pro Lys Asn Thr 523  
  
1933 AAA ATA ATA GGC CCT GGA AAG TTT GAC ACC AAT CCG GAA GAC GGG AAG ATC CTT CAT GAA ATG GGG GGC CAC CTA TCA GAA TTT 2016  
524 Lys Ile Ile Gly Pro Gly Lys Phe Asp Thr Asn Ala Glu Asp Gly Lys Ile Leu His Glu Met Gly Gly His Leu Ser Glu Phe 551  
  
2017 TTG TTG CTT TCT CTA GTT ATC CTG TCT GAC TTT GCC CCC GAG ACA GCT AGC ACG CTA TAC CTA ATT TTA CAC TAT GCA ATC CCC 2100  
552 Leu Leu Leu Ser Leu Val Ile Leu Ser Asp Phe Ala Pro Glu Thr Ala Ser Thr Leu Tyr Leu Ile Leu His Tyr Ala Ile Pro 579

2101	CAG TCC CAC GAA GAA CCT GAA GGT TGT GAT ACG AAC CAA CTT AAC CTA ACA GTG AAA CTT AGG ACA GAA GAC GTA GTG CCA TCA	2184
580	Gln Ser His Glu Glu Pro Glu Gly Cys Asp Thr Asn Gln Leu Asn Leu Thr Val Lys Leu Arg Thr Glu Asp Val Val Pro Ser	607
2185	TCA GTT TGG AAT ATT GGC AAA TAT GTT AGA CCA GAC TGG TGG CCG TAT GAA ACT AAA GTG OCT CTG CTG TTT GAA GAG	2268
608	Ser Val Trp Asn Ile Glu Lys Tyr Val Cys Val Arg Pro Asp Trp Trp Pro Tyr Glu Thr Lys Val Ala Leu Leu Phe Glu Glu	635
2269	GCA GGA CAG GTT ATA AAG CTA GTC CGG GCA CAG GAT TTA ACT AGG GTC TGG AAC AGC GCA TCA ACT ACT GCG TTT CTC	2352
636	Ala Gly Gln Val Ile Lys Leu Val Leu Arg Ala Leu Arg Asp Leu Thr Arg Val Trp Asn Ser Ala Ser Thr Thr Ala Phe Leu	663
2353	ATT TGC TTG ATA AAA GTA TTG AGA GGA CAG GTT GTG CAA GGT ATA ATA TGG CTG CTG CTG GGT GCA CAA GGG CGG CTA	2436
664	Ile Cys Leu Ile Lys Val Leu Arg Gly Gln Val Val Gln Gly Ile Ile Trp Leu Leu Val Thr Gly Ala Gln Gly Arg Leu	691
2437	GCC TGT AAG GAA GAC TAC AGG TAT GCG ATC TCG TCA ACC AAT GAG ATA GGG CTG CTG GGC GCT GAA GGT CTC ACC ACT ACC TGG	2520
692	Ala Cys Lys Glu Asp Tyr Arg Tyr Ala Ile Ser Ser Thr Asn Glu Ile Gly Leu Leu Gly Ala Glu Gly Leu Thr Thr Trp	719
2521	AAA GAA TAC AGC CAC GGT TTG CAG CTG GAC GGA ACC GGT AAG GCC GTC TGC ACT GCA GGG TCC TTT AAA GTC ACA GCA CTT	2604
720	Lys Glu Tyr Ser His Gly Leu Gln Leu Asp Asp Gly Thr Val Lys Ala Val Cys Thr Ala Gly Ser Phe Lys Val Thr Ala Leu	747
2605	AAC GTG GTT AGT AGG AGG TAT CTA GCA TCA TTG CAC AAG AGG GCT CTA CCC ACC TCA GTG ACA TTT GAG CTC CTA TTT GAC GGG	2688
748	Asn Val Val Ser Arg Arg Tyr Leu Ala Ser Leu His Lys Arg Ala Leu Pro Thr Ser Val Thr Phe Glu Leu Leu Phe Asp Gly	775
2689	ACC AAC CCA GCA ATC GAG GAG ATG GAT GAT GAC TTC GGA TTT GGG CTG TGC CCA TTT GAC ACG AGT CCT GTG ATC AAA GGG AAG	2772
776	Thr Asn Pro Ala Ile Glu Glu Met Asp Asp Phe Gly Phe Gly Leu Cys Pro Phe Asp Thr Ser Pro Val Ile Lys Gly Lys	803
2773	TAC AAC ACC ACT TTG TTA AAC GGC AGT GCT TTC TAT CTA GTC TGC CCA ATA GGA TGG ACT GGT GTC GTA GAG TGC ACA GCA GTG	2856
804	Tyr Asn Thr Thr Leu Leu Asn Gly Ser Ala Phe Tyr Leu Val Cys Pro Ile Gly Trp Thr Gly Val Val Glu Cys Thr Ala Val	831
2857	AGC CCC ACA ACC TTG AGA ACA GTG GAA GAT ACC TTC AGG AGA GAT AAG CCT TTT CCA CAT AGA GTA GAC TGT GTG ACC ACC	2940
832	Ser Pro Thr Thr Leu Arg Thr Glu Val Val Lys Thr Phe Arg Arg Asp Lys Pro Phe Pro His Arg Val Asp Cys Val Thr Thr	859
2941	ATA GTA GAA AAA GAA GAC CTA TTC CAT TGC AAG TTG GGG GGT AAT TGG ACA TGT GTA AAA GGC GAC CCA GTG ACT TAT AAG GGG	3024
860	Ile Val Glu Lys Glu Asp Leu Phe His Cys Lys Leu Gly Gly Asn Trp Thr Cys Val Lys Gly Asp Pro Val Thr Tyr Lys Gly	887
3025	GGG CAA GTA AAG CAG TGC AGG TGT TGT TGC TTT AAA GAG CCC TAC GGG CTC CCA CAC TAC CCT ATA GGC AAG TGC ATC	3108
888	Gly Gln Val Lys Gln Cys Arg Trp Cys Gly Phe Glu Phe Lys Glu Pro Tyr Gly Leu Pro His Tyr Pro Ile Gly Lys Cys Ile	915

3109 CTA ACA AAT GAG ACA GGT TAC AGG GTA GTA GAT TCC ACA GAC TGC AAC AGA GAT GGC CTC GTT ATT AGC ACT GAA GGG GAA CAT 3192  
 916 Leu Thr Asn Glu Thr Gly Tyr Arg Val Val Asp Ser Thr Asp Cys Asn Arg Asp Gly Val Ile Ser Thr Glu Gly Glu His 943

3193 GAG TGC TTG ATT GGC AAC ACT ACC GTC AAG GTG CAT GCA CTG GAT GAA AGA TTG GGC CCT ATG CCG TGC AGA CCC AAA GAA ATC 3276  
 944 Glu Cys Leu Ile Gly Asn Thr Thr Val Lys Val His Ala Leu Asp Glu Arg Leu Gly Pro Met Pro Cys Arg Pro Lys Glu Ile 971

3277 GTC TCT AGT GAG GGA CCT GTG AGG AAA ACT TCT TGT ACA TTC AAC TAC ACA AAG ACT CTA AGA AAC AAA TAC TAT GAG CCC AGA 3360  
 972 Val Ser Ser Glu Gly Pro Val Arg Lys Thr Ser Cys Thr Phe Asn Tyr Thr Lys Thr Leu Arg Asn Lys Tyr Tyr Glu Pro Arg 999

3361 GAC AGT TAC TTC CAG CAA TAT ATG CTC AAG GGC GAG TAT CAA TAC TGG TTT AAT CTG GAC GTG ACC GAC CAC CAC ACA GAC TAC 3444  
 1000 Asp Ser Tyr Phe Gln Gln Tyr Met Leu Lys Gly Glu Tyr Gln Tyr Trp Phe Asn Leu Asp Val Thr Asp His His Thr Asp Tyr 1027

3445 TTT GCC GAG TTT GTT GTC TTG GTA GTA GTA GCA CTG TTA GGA GGA AGG TAC GTT CTG TGG CTA ATA GTG ACC TAC ATA ATT CTA 3528  
 1028 Phe Ala Glu Phe Val Val Leu Val Val Val Ala Leu Leu Glu Gly Arg Tyr Val Leu Trp Leu Ile Val Thr Tyr Ile Ile Leu 1055

3529 ACA GAG CAG CTC GCT GCT CTA CAG CTA GGC CAG GGT GAG GTG GTA TTG ATA GGG AAC CTA ATT ACC CAC ACG GAC AAT GAG 3612  
 1056 Thr Glu Gln Leu Ala Ala Gly Leu Gln Leu Gly Gln Gly Val Val Leu Ile Gly Asn Leu Ile Thr His Thr Asp Asn Glu 1083

3613 GTG GTG GTG TAC TTC CTA CTC TAC TTA GTA ATA AGA GAT GAG CCC ATA AAG AAA TGG ATA CTA CTG CTG TTT CAT GCA ATG 3696  
 1084 Val Val Val Tyr Phe Leu Leu Leu Tyr Leu Val Ile Arg Asp Glu Pro Ile Lys Lys Trp Ile Leu Leu Leu Phe His Ala Met 1111

3697 ACT AAC AAT CCA GTC ACC AGT TTT GAC ATC ACA GTA TTA GCA TTA GCA CTG GCA CTC GCA CTG GAT GGT AAG ATA GAT GGT GGC TGG 3780  
 1112 Thr Asn Asn Pro Val Lys Thr Ile Thr Val Ala Leu Leu Met Ile Ser Gly Val Ala Lys Gly Gly Lys Ile Asp Gly Gly Trp 1139

3781 CAG AGA CAA CCG GTG ACC AGT TTT GAC ATC CAA CTC GCA CTG GCA CTG GCA CTC GCA CTG GAT GGT AAG ATA GAT GGT GGC TGG 3864  
 1140 Gln Arg Gln Pro Val Thr Ser Phe Asp Ile Gln Leu Ala Leu Ala Val Val Val Val Met Leu Leu Ala Lys Arg Asp 1167

3865 CCG ACT ACT TTC CCT TTG GTA ATC ACA GTG GCA ACC CTG AGA ACG GGC AAG ATA ACC AAC GGT TTT AGC ACA GAT CTA GTC ATA 3948  
 1168 Pro Thr Thr Phe Pro Leu Val Ile Thr Val Ala Thr Leu Arg Thr Ala Lys Ile Thr Asn Gly Phe Ser Thr Asp Leu Val Ile 1195

3949 GCC ACA GTG TCG GCA GCT TTG TTA ACT TGG ACC TAT ATC AGC GAC TAC TAC AAA TAC AAG ACT TGG CTA CAG TAC CTC GTC AGC 4032  
 1196 Ala Thr Val Ser Ala Ala Leu Leu Thr Thr Tyr Ile Ser Asp Tyr Tyr Lys Thr Trp Leu Gln Tyr Leu Val Ser 1223

4033 ACG GTG ACT GGA ATC TTC CTG ATA AGG GTG CTG AAG GGA ATA GGC GAA TTG GAT CTG CAC GCC CCA ACC TTG CCG TCT CAC AGA 4116  
 1224 Thr Val Thr Gly Ile Phe Leu Ile Arg Val Leu Lys Gly Ile Gly Glu Leu Asp Leu His Ala Pro Thr Leu Pro Ser His Arg 1251

4117 CCC CTC TTT TAC ATC CTT GTA TAC CTT ATT TCC ACT GCC GTG GTA ACT AGA TGG AAT CTG GAC GTA GCC GGA TTG TTG CTG CAG 4200  
1252 Pro Leu Phe Tyr Ile Leu Val Tyr Leu Ile Ser Thr Ala Val Val Thr Arg Trp Asn Leu Asp Val Ala Gly Leu Leu Gln 1279

4201 TGC GTC CCA ACT CTT TTA ATG GTT TTT ACG ATG TGG GCA GAC ATT CTC ACC CTA ATT CTC ATA CTA CCT ACT TAT GAG TTA ACA 4284  
1280 Cys Val Pro Thr Leu Leu Met Val Phe Thr Met Trp Ala Asp Ile Leu Thr Leu Ile Leu Pro Thr Tyr Glu Leu Thr 1307

4285 AAG TTA TAC TAC CTT AAG GAA GTG AAG ATT GGG GCA GAA AGA GGT TGG CTG TGG AAA ACT AAC TAT AAG AGG GTA AAC GAC ATC 4368  
1308 Lys Leu Tyr Tyr Leu Lys Glu Val Lys Ile Gly Ala Glu Arg Gly Trp Leu Trp Lys Thr Asn Tyr Lys Arg Val Asn Asp Ile 1335

4369 TAC GAG GTC GAC CAA ACT AGC GAA GGG GTT TAC CTT TTC CTT TCT AAA CAG AGG ACG AGC GCT ATA ACT AGT ACC ATG TTG CCA 4452  
1336 Tyr Glu Val Asp Gln Thr Ser Glu Gly Val Tyr Leu Phe Pro Ser Lys Gln Arg Thr Ser Ala Ile Thr Ser Thr Met Leu Pro 1363

4453 TTA ATC AAA GCC ATA CTC ATT AGC TGC ATC AGC AAC AAG TGG CAA CTC ATA TAC TTA CTC TAC TAC TTT GAA GTG TCT TAC 4536  
1364 Leu Ile Lys Ala Ile Leu Ile Ser Cys Ile Ser Asn Lys Trp Gln Leu Ile Tyr Leu Leu Tyr Leu Ile Phe Glu Val Ser Tyr 1391

4537 TAC CTC CAC AAG AAA GTT ATA GAT GAA ATA GCT GGT GGG ACC AAC TTC GTT TCA AGG CTC GTG GCG GCT TTG ATT GAA GTC AAT 4620  
1392 Tyr Leu His Lys Lys Val Ile Asp Glu Ile Ala Gly Gly Thr Asn Phe Val Ser Arg Leu Val Ala Ala Leu Ile Glu Val Asn 1419

4621 TGG GCC TTC GAC AAT GAA GAA GTC AAA GGC TTA AAG AAG TTC TTC TCT AGT AGG GTC AAA GAG TTG ATC ATC AAA CAC 4704  
1420 Trp Ala Phe Asp Asn Glu Glu Val Lys Gly Leu Lys Lys Phe Leu Leu Ser Ser Arg Val Lys Glu Leu Ile Ile Lys His 1447

4705 AAA GTG AGG AAT GAA GTA GTG GTC CGC TGG TTT GGA GAT GAA GAG ATT TAT GGG ATG CCA AAG CTG ATC GGC TTA GTT AAG GCA 4788  
1448 Lys Val Arg Asn Glu Val Val Val Arg Trp Phe Gly Asp Glu Glu Ile Tyr Gly Met Pro Lys Leu Ile Gly Leu Val Lys Ala 1475

4789 GCA ACA CTA AGT AGA AAC AAC CAC TGT ATG TTG TGT ACC GTC TGT GAG GAC AGA GAT TGG AGA GGG GAA ACT TGC CCT AAA TGT 4872  
1476 Ala Thr Leu Ser Arg Asn Lys His Cys Met Leu Cys Thr Val Cys Glu Asp Arg Asp Trp Arg Gly Glu Thr Cys Pro Lys Cys 1503

4873 GGG CGT TTT GGA CCA CCA GTG GTC TGC GGT ATG ACC CTA GCC GAT TTC GAA GAA AAA CAC TAT AAA AGG ATT TTC ATT AGA GAG 4956  
1504 Gly Arg Phe Gly Pro Pro Val Val Cys Gly Met Thr Leu Ala Asp Phe Glu Glu Lys His Tyr Lys Arg Ile Phe Ile Arg Glu 1531

4957 GAC CAA TCA GGC GGG CCA CTT AGG GAG GAG CAT GCA GGG TAC TGG CAG TAC AAA GCC AGG GGT CAA CTG TTT TTG AGG AAC CTC 5040  
1532 Asp Gln Ser Gly Pro Leu Arg Glu Glu His Ala Gly Tyr Leu Gln Tyr Lys Ala Arg Gly Gln Leu Phe Leu Arg Asn Leu 1559

5041 CCA GTG TTA GCT ACA AAA GTC AAG ATG CTC GGT AAC CTC GGG ACA GAG ATT GGG GAT CTG GAA CAC CTT GGC TGG GTG 5124  
1560 Pro Val Leu Ala Thr Lys Val Lys Met Leu Leu Leu Gly Thr Glu Ile Gly Asp Leu Glu His Leu Gly Trp Val 1587

5125	CTT AGA GGG CCA GCT GTT TGC AAG AAG GTT ACT GAA CAC GAA AGA TGC ACC ACG TCT ATA ATG GAT AAG TTG ACT GCT TTC TTT	5208
1588	Leu Arg Gly Pro Ala Val Cys Lys Lys Val Thr Glu His Glu Arg Cys Thr Thr Ser Ile Met Asp Lys Leu Thr Ala Phe Phe	1615
5209	GGG GTA ATG CCA AGG GGC ACT ACT CCC AGA GCT CCC GTA AGA TTC CCT ACC TCC CTC CTA AAG ATA AGA AGA GGG CTG GAG ACT	5292
1616	Gly Val Met Pro Arg Gly Thr Thr Pro Arg Ala Pro Val Arg Phe Pro Thr Ser Leu Leu Lys Ile Arg Arg Gly Leu Glu Thr	1643
5293	GGT TGG GCT TAC ACA CAC CAA GGT GGC ATC AGC TCA GTA GAC CAT GTC ACT TGT GGG AAA GAC TTA CTG CTG TGT GAC ACC ATG	5376
1644	Gly Trp Ala Tyr Thr His Glu Gly Gly Ile Ser Ser Val Asp His Val Thr Cys Gly Lys Asp Leu Leu Val Cys Asp Thr Met	1671
5377	GGT CGG ACA AGG GTT GTT TGC CAG TCA AAT AAT AAG ATG ACC GAC GAG TCC GAA TAC GGA GTC AAA ACT GAC TCC GGG TCC CCA	5460
1672	Gly Arg Thr Arg Val Val Cys Gln Ser Asn Asn Lys Met Thr Asp Glu Ser Glu Tyr Gly Val Lys Thr Asp Ser Gly Cys Pro	1699
5461	GAG GGA GCC AGG TGT TAC GTG TTT AAC CCG GAA GCA GTT AAC ATA TCA GGC ACT AAA GGA GCC ATG GTC CAC TTA CAG AAA ACG	5544
1700	Glu Gly Ala Arg Cys Tyr Val Phe Asn Pro Glu Ala Val Asn Ile Ser Gly Thr Lys Gly Ala Met Val His Leu Gln Lys Thr	1727
5545	GGT GGA GAA TTC ACC TGT GTG ACA GCA TCA GGA ACC CCG GCC TTC TTT GAC CTC AAG AAC CTT AAG GGC TGG TCA GGG CTA CCG	5628
1728	Gly Gly Glu Phe Thr Cys Val Thr Ala Ser Gly Thr Pro Ala Phe Phe Asp Leu Lys Asn Leu Lys Gly Trp Ser Gly Leu Pro	1755
5629	ATA TTT GAA GCA TCA AGT GGA AGG GTA GTC GGA AGG GTC AAG GTC GGG AAG AAC GAG GAT TCC AAA CCA ACC AAG CTC ATG AGT	5712
1756	Ile Phe Glu Ala Ser Ser Gly Arg Val Val Gly Arg Val Lys Val Gly Lys Asn Glu Asp Ser Lys Pro Thr Lys Leu Met Ser	1783
5713	GGG ATA CAA ACG GTT TCT AAA AGC GCC ACA GAC TTG ACG GAG ATG GTG AAG AAG ATA ACG ACC ATG AAC AGG GGA GAG TTC AGA	5796
1784	Gly Ile Gln Thr Val Ser Lys Ser Ala Thr Asp Leu Thr Glu Met Val Lys Lys Ile Thr Thr Met Asn Arg Gly Glu Phe Arg	1811
5797	CAA ATA ACC CTG GCC ACA GGT GCC GGA AAA ACT ACA GAG CTC CCT AGA TCA GTT ATA GAA GAG ATA GGG AGG CAT AAG AGG GTG	5880
1812	Gln Ile Thr Leu Ala Thr Gly Ala Thr Gly Lys Thr Thr Glu Leu Pro Arg Ser Val Ile Glu Glu Ile Gly Arg His Lys Arg Val	1839
5881	TTG GTC TTA ATC CCC TTG AGG GCG GCA GCA TCA GTA TAC CAA TAC ATG AGA CAG AAA CAT CCG AGT ATA GCA TTC AAT CTA	5964
1840	Leu Val Leu Ile Pro Leu Arg Ala Ala Glu Ser Val Tyr Gln Tyr Met Arg Gln Lys His Pro Ser Ile Ala Phe Asn Leu	1867
5965	AGG ATA GGT GAG ATG AAG GAA GGT GAT ATG GCC ACG GGA ATA ACC TAT GCC TCT TAC GGT TAC TTT TCC CAG ATG TCA CAA CCC	6048
1868	Arg Ile Gly Glu Met Lys Glu Gly Asp Met Ala Thr Gly Ile Thr Tyr Ala Ser Tyr Gly Tyr Phe Cys Gln Met Ser Gln Pro	1895
6049	AAG CTG AGA GCC GCA ATG GTA GAA TAT TCC TTT ATA TTC CTA GAT GAG TAT CAT TGT GCT ACC CCA GAA CAA CTG GCA ATC ATG	6132
1896	Lys Leu Arg Ala Ala Met Val Glu Tyr Ser Phe Ile Phe Leu Asp Glu Tyr His Cys Ala Thr Pro Glu Gln Leu Ala Ile Met	1923

6113	GGG AAG ATC CAC AGA TTC TCA GAA AAC CTG CGG GTG GTA GCT ATG ACA GCG ACA CCG GCA GGC ACA GTA ACA ACC ACT GGG CAG	6216
1924	Gly Lys Ile His Arg Phe Ser Glu Asn Leu Arg Val Val Ala Met Thr Ala Thr Pro Ala Gly Thr Val Thr Thr Thr Gly Gln	1951
6317	AAA CAC CCT ATA GAG GAA TTT ATA GCC CCG GAA GTG ATG AAA GGA GAA GAC TTG GGT TCT GAG TAC TTA GAT ATT GCC GGA CTG	6300
1952	Lys His Pro Ile Glu Glu Phe Ile Ala Pro Glu Val Met Lys Gly Glu Asp Leu Gly Ser Glu Tyr Leu Asp Ile Ala Gly Leu	1979
6301	AAG ATA CCA GTA GAG GAG ATG AAG AAT AAC ATG CTA GTT TTT GTG CCC ACC AGG AAC ATG CCG GTA GAG CCG GCA AAG AAA TTG	6384
1980	Lys Ile Pro Val Glu Glu Met Lys Asn Asn Met Lys Val Phe Val Pro Thr Arg Asn Met Ala Val Glu Ala Ala Lys Lys Leu	2007
6385	AAG GCC AAA GGA TAC AAC TCG GGC TAC TAC AAC GGA GAG GAC CCA TCT AAC CTG AGG GTG GTG ACG TCG CAG TCC CCA TAC	6468
2008	Lys Ala Lys Gly Tyr Asn Ser Gly Tyr Tyr Ser Gly Glu Asp Pro Ser Asn Leu Arg Val Val Thr Ser Gln Ser Pro Tyr	2035
6469	GTG GTG GTA GCA ACC AAC GCA ATA GAA TCG GGC GTT ACC CTC CCG GAC CTG GAC GTG GTT GTC GAC ACG GGA CTC AAG TGT GAA	6552
2036	Val Val Val Ala Thr Asn Ala Ile Glu Ser Gly Val Thr Leu Pro Asp Leu Asp Val Val Val Asp Thr Gly Leu Lys Cys Glu	2063
6553	AAA AGA ATC CGA CTG TCA CCC AAG ATG CCT TTC ATA GTG ACG GGC CTG AAA AGA ATG GGC GTC ACT ATT GGG GAA CAA GCC CAG	6636
2064	Lys Arg Ile Arg Leu Ser Pro Lys Met Pro Phe Ile Val Thr Gly Leu Lys Arg Met Ala Val Thr Ile Gly Glu Ala Gln	2091
6637	AGA AGA GGG AGG GTT GGA AGA GTG AAG CCC GGG AGA TAC TAC AAG AGT CAA GAA ACA CCT GTC GGC TCT AAA GAC TAC CAT TAT	6720
2092	Arg Arg Gly Arg Val Gly Arg Val Lys Pro Gly Arg Tyr Tyr Arg Ser Gln Glu Thr Thr Pro Val Gly Ser Lys Asp Tyr His Tyr	2119
6721	GAC TTA TTG CAA GCC CAG AGG TAC GGC ATA GAA GAT GGG ATA AAT ATC ACC AAA TCC TTC AGA GAG ATG AAC TAC GAC TGG AGC	6804
2120	Asp Leu Leu Gln Ala Gln Arg Tyr Gly Ile Glu Asp Gly Ile Asn Ile Thr Lys Ser Phe Arg Glu Met Asn Tyr Asp Trp Ser	2147
6805	CTT TAT GAG GAA GAT AGC CTG ATG ATC ACA CAA CTG GAA ATC CTC AAC CAG TTG ATA TCA GAA GAG CTG CCG ATG GCA GTA	6888
2148	Leu Tyr Glu Glu Asp Ser Leu Met Ile Thr Gln Leu Glu Ile Leu Asn Asn Leu Leu Ile Ser Glu Glu Leu Pro Met Ala Val	2175
6889	AAA AAT ATA ATG GCC AGG ACC GAC CAC CCA GAA CCA ATT CAA CTC GCG TAT AAC ACC TAC GAG ACA CAG GTG CCG GTA TTA TTC	6972
2176	Lys Asn Ile Met Ala Arg Thr Asp His Pro Glu Pro Ile Gln Leu Ala Tyr Asn Ser Tyr Glu Thr Gln Val Pro Val Leu Phe	2203
6973	CCA AAA ATA AGA AAT GGA GAG GTG ACT GAT TAC TAC ACC TTC CTC AAT GCA AGA AAA TTG GGA GAT GAC GTA CCC	7056
2204	Pro Lys Ile Arg Asn Gly Glu Val Thr Asp Thr Tyr Asp Asn Tyr Thr Phe Leu Asn Ala Arg Lys Leu Gly Asp Asp Val Pro	2231
7057	CCC TAC GTG TAT GCT ACA GAG GAT GAG TCG GAA CTG TCG GGC CTA GAT TGG CCG GAC CCA GGA AAC CAA GGC ACC	7140
2232	Pro Tyr Val Tyr Ala Thr Glu Asp Glu Asp Leu Ala Val Glu Leu Leu Gly Leu Asp Trp Pro Asp Pro Gly Asn Gln Gly Thr	2259



7141	GTG GAA GCT GGC AGA GCA CTA AAA CAG GTG GTT GGT CTA TCA ACA GCA GAG AAC GCC CTG CTA GTC GCC CTG TTC GGC TAC GTG	7224
2260	Val Glu Ala Gly Arg Ala Leu Lys Gln Val Val Gly Leu Ser Thr Ala Glu Asn Ala Leu Val Ala Leu Phe Gly Tyr Val	2287
7225	GGG TAC CAG GCG CTT TCA AAG AGA CAT ATA CCA GTG GTC ACA GAT ATA TAT TCA GTA GAA GAT CAC AGG CTA GAG GAC ACT ACG	7308
2288	Gly Tyr Gln Ala Leu Ser Lys Arg His Ile Pro Val Val Thr Asp Ile Tyr Ser Val Glu Asp His Arg Leu Glu Asp Thr Thr	2315
7309	CAC CTA CAG TAT GCT CCG AAT GCC ATC AAG ACG CAG GGG AAG GAA ACT GAA TTG AAG GAG CTG GCT CAG GGG GAT GTG CAG AGA	7392
2316	His Leu Gln Tyr Ala Pro Asn Ala Ile Lys Thr Glu Gly Lys Glu Thr Glu Leu Lys Glu Ala Gln Gly Asp Val Gln Arg	2343
7393	TGT GTG GAA GCA GTG ACC AAT TAT GCG AGA GAG GGC ATC CAA TTC ATG AAG TCG CAG GCA CTG AAA GTG AGA GAA ACC CCT ACC	7476
2344	Cys Val Glu Ala Val Thr Asn Tyr Ala Arg Glu Gly Ile Gln Phe Met Lys Ser Gln Ala Leu Lys Val Arg Glu Thr Pro Thr	2371
7477	TAT AAA GAG ACA ATG AAC ACC GTG GCA GAT TAT GTG AAA AAG TTT ATT GAG GCA CTG ACG GAT AGC AAG GAA GAC ATC ATT AAA	7560
2372	Tyr Lys Glu Thr Met Asn Thr Val Ala Asp Tyr Val Lys Lys Phe Ile Glu Ala Leu Thr Asp Ser Lys Glu Asp Ile Ile Lys	2399
7561	TAT GGG CTG TGG GGG OCA CAT ACG OCA TTG TAT AAG AGC ATT GGT GCC AGG CTT GGT CAC GAA ACC GCG TTC GCA ACT CTA GTT	7644
2400	Tyr Gly Leu Trp Gly Ala His Thr Ala Leu Tyr Lys Ser Ile Gly Ala Arg Leu Gly His Glu Thr Ala Phe Ala Thr Leu Val	2427
7645	GTG AAG TGG TTG GCA TTT GGG GGG GAG TCA ATA TCA GAC CAC ATA AAG CAA JCG GCC ACA GAC TTG GTC GTT TAT TAC ATT ATT	7728
2428	Val Lys Trp Leu Ala Phe Gly Gly Glu Ser Ile Ser Asp His Ile Lys Gln Ala Ala Thr Asp Leu Val Val Tyr Tyr Ile Ile	2455
7729	AAC AGA CCT CAA TTC CCA GGA GAC ACA GAA ACA CAA CAA GGG AGA AAA TTT GTT GCC AGC CTG CTA GTC TCA GCT CTA GCG	7812
2456	Asn Arg Pro Gln Phe Pro Gly Asp Thr Glu Thr Gln Gln Glu Gly Arg Lys Phe Val Ala Ser Leu Leu Val Ser Ala Leu Ala	2483
7813	ACT TAT ACA TAC AAG AGC TGG AAC TAC AAT AAT CTG TCC AAA ATA GTT GAA CCG GCT TTG GCT ACC CTG CCC TAT GCC GCT AAA	7896
2484	Thr Tyr Thr Tyr Lys Ser Trp Asn Tyr Asn Asn Leu Ser Lys Ile Val Glu Pro Ala Leu Ala Thr Leu Pro Tyr Ala Ala Lys	2511
7897	GCC CTC AAG CTA TTT GCT CCT ACC CGA CTG GAG AGC GTT GTC ATA CTG AGC ACT GCA ATC TAC AAA ACA TAC CTA TCA ATA AGG	7980
2512	Ala Leu Lys Leu Phe Ala Pro Thr Arg Leu Glu Ser Val Val Ile Leu, Ser Thr Ala Ile Tyr Lys Thr Tyr Leu Ser Ile Arg	2539
7981	CGA GGC AAA AGT GAT GGT CTG CTA GGT ACA GGG GTT AGC GCG GCC ATG GAA ATT ATG TCA CAA AAC CCA GTA TCT GTG GGT ATA	8064
2540	Arg Gly Lys Ser Asp Gly Leu Leu Gly Thr Gly Val Ser Ala Ala Met Glu Ile Met Ser Gln Asn Pro Val Ser Val Gly Ile	2567
8065	GCA GTT ATG CTA GGG GTA GGG GCT GTA GCA GCC CAC AAT GCA ATT GAA GCC AGT GAG CAA AAA AGA ACA CTA CTT ATG AAA GTC	8148
2568	Ala Val Met Leu Gly Val Gly Ala Val Ala Ala His Asn Ala Ile Glu Ala Ser Glu Gln Lys Arg Thr Leu Leu Met Lys Val	2595

8149 TTT GTG AAA AAC TTC TTA GAC CAG GCC GCC ACC GAC GAA CTA GTC AAA GAG AGC CCT GAG AAA ATA ATA ATG GCT TTG TTC GAA 8232  
2596 Phe Val Lys Asn Phe Leu Asp Gln Ala Ala Thr Asp Glu Val Lys Glu Ser Pro Glu Lys Ile Ile Met Ala Leu Phe Glu 2623  
8233 GCG GTG CAA ACG GTG GGC AAC CCT CTT AGA TTA GTG TAC CAC CTC TAT TTA GGT TTC TAT AAA GGG TGG GAA GCA AAA GAG TTG 8316  
2624 Ala Val Gln Thr Val Gly Asn Pro Leu Arg Leu Val Tyr His Leu Tyr Gly Val Phe Tyr Lys Glu Trp Glu Ala Lys Glu Leu 2651  
8317 GCC CAA AGA ACA GCC GGC ACG AAC CTT TTC ACC TTG ATA ATG TTC GAG GCT GTG GAA CTA CTG GGA GTA GAC AGT GAG GGA AAA 8400  
2652 Ala Gln Arg Thr Ala Gly Arg Asn Leu Phe Thr Leu Ile Met Phe Glu Ala Val Glu Leu Leu Gly Val Asp Ser Glu Gly Lys 2679  
8401 ATT CGC CAG CTA TCG AGC AAT TAC ATA CTA GAG CTC TTG TAT AAG TTC CGC GAC AAT ATC AAG TCT AGT GTG AGG GAG ATA GCA 8484  
2680 Ile Arg Gln Leu Ser Ser Asn Tyr Ile Leu Glu Leu Leu Tyr Lys Phe Arg Asp Asn Ile Lys Ser Val Arg Glu Ile Ala 2707  
8485 ATC AGC TGG GCC GCC CCT TTT AGT TGC GAT TGG ACA CCA ACA GAT GAC AGA ATA GGG CTT CCC CAT GAC AAT TAC CTC CGA 8568  
2708 Ile Ser Trp Ala Pro Ala Pro Phe Ser Cys Asp Trp Thr Pro Thr Asp Arg Ile Gly Leu Pro His Asp Asn Tyr Leu Arg 2735  
8569 GTG GAG ACA AAG TGC CCC TGT TAC AGG ATG AAA GCG GTA AAA AAC TGC GCT GCG GAG TTG AGA CTT CTG GAG GAA GCG GGT 8632  
2736 Val Glu Thr Lys Cys Pro Cys Gly Tyr Arg Met Lys Ala Val Lys Asn Cys Ala Gly Glu Leu Arg Leu Leu Glu Gly Gly 2763  
8653 TCA TTC CTC TGC AGA AAT AAA TTC GGT AGA GGC TCA CAA AAC TAC AGG GTG ACA AAA TAC TAT GAT GAC AAT TTA TCA GAA ATA 8736  
2764 Ser Phe Leu Cys Arg Asn Lys Phe Gly Arg Gly Ser Gln Asn Tyr Arg Val Thr Lys Tyr Asp Asn Leu Ser Glu Ile 2791  
8737 AAA CCA GTG ATA AGA ATG GAA GGA CAC GTG GAA CTG TAT TAC AAG GCG GCC ACT ATC AAA CTG GAT TTT AAC AAC AGT AAA ACG 8820  
2792 Lys Pro Val Ile Arg Met Glu Met Glu Gly His Val Glu Leu Tyr Tyr Lys Gly Ala Thr Ile Lys Leu Asp Phe Asn Asn Ser Lys Thr 2819  
8821 GTA CTG GCA ACT GAC AAA TGG GAG GTT GAC CAC TCC ACC CTG GTT AGG GCA CTC AAG AGG TAC ACA GGG GCT GGA TAT CGA GCG 8904  
2820 Val Leu Ala Thr Asp Lys Trp Glu Val Asp His Lys His Leu Ile Gln Arg Asp Cys Ala Thr Ile Thr Lys Arg Tyr Thr Gly Ala Gly Tyr Arg Gly 2847  
8905 GCG TAT TTG GGT GAG AAA CCT AAC CAT AAA CAT CTG ATA CAG AGA GAC TGT GCA ACG ATT ACC AAA GAC AAG GTC TGC TTC ATC 8988  
2848 Ala Tyr Leu Gly Glu Lys Pro Asn His Lys Pro Asn His Lys Pro Asn His Lys Pro Asn His Lys Pro Asn His Lys Pro Asn His Lys 2875  
8989 AAA ATG AAG AGA GGG TGT GCG TTC ACT TAT GAC CTA TCC CTC CAC AAC CTT ACC CGG CTA ATC GAA TTG GTA CAC AAG AAT AAC 9072  
2876 Lys Met Lys Arg Gly Cys Ala Phe Thr Tyr Asp Leu Ser Leu His Asn Leu Thr Arg Leu Ile Glu Leu Val His Lys Asn Asn 2903  
9073 CTG GAA GAT AGA GAA ATC CCT GCT GTG ACG GGT ACA ACC TGG CTG GCC TAC ACA TTT GTG AAT GAA GAC ATA GGG ACC ATA AAA 9156  
2904 Leu Glu Asp Arg Glu Ile Pro Ala Val Thr Val Thr Trp Leu Ala Tyr Thr Phe Val Asn Glu Asp Ile Gly Thr Ile Lys 2931  
9157 CCA ACT TTT GGG GAA AAG GTG ACA CCG GAG GAG GTA GTC TTG CAG CCT GCT GTG GTG GAC ACA ACA GAT GTA 9240  
2932 Pro Thr Phe Gly Glu Lys Val Thr Pro Glu Lys Gln Glu Val Val Leu Gln Pro Ala Val Val Asp Thr Thr Asp Val 2959

9241 GCC GTG ACC GTG GTA GGG GAA ACC TCT ACT ATG AAT ACA GGG GAG ACC CCG ACA ACA TTT ACC AGC TTA GGT TCG GAC TCG AAG 9324  
 2960 Ala Val Thr Val Val Gly Glu Thr Ser Thr Met Thr Thr Gly Glu Thr Pro Thr Thr Phe Thr Ser Leu Gly Ser Asp Ser Lys 2967  
  
 9325 GTC CGA CAA GTC CTG AAG CTG GGC GTG GAC GAT GGT CAA TAC CCC GGG CCT AAT CAG CAG AGA GCA AGC CTG CTC GAA GCT ATA 9408  
 2988 Val Arg Gln Val Val Leu Lys Leu Gly Val Val Asp Asp Gly Gln Tyr Pro Gly Pro Asn Gln Gln Arg Ala Ser Leu Leu Glu Ala Ile 3015  
  
 9409 CAA GGT GTG GAT GAA AGG CCC TCG GTA CTG ATA CTG GGG TCT GAT AAG GCC ACC TCC AAT AGG GTC AAG ACC GCA AAG AAT GTG 9492  
 3016 Gln Gly Val Asp Glu Arg Pro Ser Val Leu Ile Leu Gly Ser Asp Lys Ala Thr Ser Asn Arg Val Lys Thr Ala Lys Asn Val 3043  
  
 9493 AAG ATA TAT AGG AGC AGG GAC CCC CTG GAA CTG AGA GAA ATG ATG AAA AGG GGA AAA ATC CTA GTC GTA GCC TTG TCT AGA GTC 9576  
 3044 Lys Ile Tyr Arg Ser Arg Asp Pro Leu Glu Leu Arg Glu Met Met Lys Arg Gly Lys Ile Leu Val Val Ala Leu Ser Arg Val 3071  
  
 9577 GAT ACC GCT CTG AAA TTC GTT GAT TAC AAA GGC ACC TTC CTG ACC AGA GAG ACC CTA GAG GCA TTA AGT CTG GGT AAG CCT 9660  
 3072 Asp Thr Ala Leu Leu Lys Phe Val Asp Tyr Lys Gly Thr Phe Leu Thr Arg Glu Thr Leu Glu Ala Leu Ser Leu Gly Lys Pro 3099  
  
 9661 AAG AAA AGA GAC ATA ACT AAA GCA GAA GCA TGG CTG CTC GGC CAA ATA GAA GAG CTG CCT GAC TGG TTC GCA 9744  
 3100 Lys Lys Arg Asp Ile Thr Lys Ala Glu Ala Gln Trp Leu Leu Arg Leu Glu Asp Gln Ile Glu Leu Pro Asp Trp Phe Ala 3127  
  
 9745 GCC AAG GAA CCC ATA TTT CTA GAA GCC AAC ATT AAA COT GAC AAG TAT CAC CTG GTA GGG GAC ATA GCC ACT ATT AAA GAA ALA 9828  
 3128 Ala Lys Glu Pro Ile Phe Leu Glu Ala Asn Ile Lys Arg Asp Lys Tyr His Leu Val Gly Asp Ile Ala Thr Ile Lys Glu Lys 3155  
  
 9829 GCC AAA CAA CTG GGG GCA ACA GAC TCC ACA AAG ATA TCA AAG GAG GTT GGC GCG AAA GTG TAT TCT ATG AAG CTG AGT AAC TGG 9912  
 3156 Ala Lys Gln Leu Gly Ala Thr Asp Ser Thr Lys Ile Ser Lys Glu Val Gly Ala Lys Val Tyr Ser Met Lys Leu Ser Asn Trp 3183  
  
 9913 GTG ATA CAA GAA GAG AAT AAA CAA GGC AGC CTT GCC CCC CTG TTT GAA GAG CTC CTG CAA CAG TGC CCA CCC GGG GGC CAG AAC 9996  
 3184 Val Ile Gln Glu Glu Asn Lys Gln Gly Ser Leu Ala Pro Leu Phe Glu Glu Leu Leu Gln Cys Pro Pro Gly Gly Gln Asn 3211  
  
 9997 AAA ACC ACA CAT ATG GTC TCA GCC TAC CAA CTA GCT CAA GGG AAT TGG GTG CCA GTT AGT TGC CAC CTG TTC ATG GGG ACC ATA 10080  
 3212 Lys Thr Thr His Met Val Ser Ala Tyr Gln Leu Ala Gln Gly Asn Trp Val Pro Val Ser Cys His Val Phe Met Gly Thr Ile 3239  
  
 10081 CCC GCC AGA AGA ACC AAG ACT CAT CCT TAT GAG GCA TAC GTT AAG CTA AGG GAG TTG GTA GAT GAA CAT AAG ATG AAG GCA TTA 10164  
 3240 Pro Ala Arg Arg Thr Lys Thr His Pro Tyr Glu Ala Tyr Val Lys Leu Arg Glu Leu Val Asp Glu His Lys Met Lys Ala Leu 3267  
  
 10165 TGT GGC GGA TCA GGC CTA ACT AAG CAC AAC GAA TGG GTA ATT GGC AAG GTC AAG TAT CAA GGA AAC CTG AGG ACC AAA CAC ATG 10248  
 3268 Cys Gly Gly Ser Gly Leu Ser Lys His Asn Glu Trp Val Ile Gly Lys Val Lys Tyr Gln Gly Asn Leu Arg Thr Lys His Met 3295

10249 TTG AAC CCC GGA AAG GTG GCG GAG CAA CTG CAC AGA GAA GGG TAC AGG CAC AAT GTG TAT JAT AAG ACA ATA GGT TCA GTG ATG 10332  
3296 Leu Asn Pro Gly Lys Val Ala Glu Gln Leu His Arg Glu Gly Tyr Arg His Asn Val Tyr Asn Lys Thr Ile Gly Ser Val Met 3323

10333 ACA GCA ACT GGT ATC AGG CTG GAG AAG TTA CCT GTG GTT AGG GCC CAA ACA GAC ACA ACC AAC TTC CAC CAA GCA ATA AGG GAT 10416  
3324 Thr Ala Thr Gly Ile Arg Leu Glu Lys Leu Pro Val Val Arg Ala Gln Thr Asp Thr Asn Phe His Gln Ala Ile Arg Asp 3351

10417 AAA ATA GAC AAG GAG GAG AAC CTA CAG ACC CCT GGC TTG CAT AAG AAG TTA ATG GAA GTC TTC AAT GCA TTA AAA AGA CCC GAG 10500  
3352 Lys Ile Asp Lys Glu Glu Asn Leu Gln Thr Pro Gly Leu His Lys Lys Leu Met Glu Val Phe Asn Ala Leu Lys Arg Pro Glu 3379

10501 CTT GAG GCC TCT TAT GAC GCT GTG GAT TGG GAG GAA TTG GAG AGA GGA ATA AAT AGG AAG GGT GCT GCT GGT TTC TTC GAA CGC 10584  
3380 Leu Glu Ala Ser Tyr Asp Ala Val Asp Trp Glu Glu Leu Glu Arg Gly Ile Asn Arg Lys Gly Ala Ala Gly Phe Phe Glu Arg 3407

10585 AAG AAC ATA GGA GAG GTT TTG GAT TCG GAA AAA AAT AAA GTC GAA GAG GTT ATT GAC AGT TTG AAA AAA GGT AGG AAT ATC AGA 10668  
3408 Lys Asn Ile Gly Glu Val Leu Asp Ser Glu Lys Asn Lys Val Glu Glu Val Ile Asp Ser Leu Lys Lys Gly Arg Asn Ile Arg 3435

10669 TAC TAC GAA ACT GCA ATC CCG AAA AAC GAG AAG AGG GAT GTC AAT GAT GAC TGG ACC GCT GGT GAT TTC GTA GAT GAG AAG AAG 10752  
3436 Tyr Tyr Glu Thr Ala Ile Pro Lys Asn Glu Lys Arg Asp Val Asn Asp Asp Trp Thr Ala Gly Asp Phe Val Asp Glu Lys Lys 3463

10753 CCA AGA GTG ATA CAA TAC CCT GAG GCT AAA ACT AGG TTG GCT ATT ACT AAG GTA ATG TAC AAG TGG GTC AAA CAG AAG CCA GTT 10836  
3464 Pro Arg Val Ile Gln Tyr Pro Glu Ala Lys Thr Arg Leu Ala Ile Thr Lys Val Met Tyr Lys Trp Val Lys Gln Lys Pro Val 3491

10837 GTC ATA CCG GGT TAT GAA GGT AAG ACA CCC CTG TTT CAA ATT TTT GAC AAA GTG AAG AAA GAA TGG GAT CAA TTC CAA AAC CCT 10920  
3492 Val Ile Pro Gly Tyr Glu Gly Lys Thr Pro Leu Phe Gln Ile Phe Asp Lys Val Lys Lys Glu Trp Asp Gln Phe Gln Asn Pro 3519

10921 GTG GCA GTT AGC TTT GAT ACC AAA GCG TGG GAT ACC CAG GTA ACC ACA AGG GAT TTG GAG CTA ATA AGG GAT ATA CAG AAG TTC 11004  
3520 Val Ala Val Ser Phe Asp Thr Lys Ala Trp Asp Thr Gln Val Thr Thr Arg Asp Leu Glu Leu Ile Arg Asp Ile Gln Lys Phe 3547

11005 TAT TTT AAA AAG AAA TGG CAC AAA TTC ATT GAC ACC CTA ACC CAG CTA CCA GAA GTA CCC GTA ATC AGT GCC GAC GGG GAG 11088  
3548 Tyr Phe Lys Lys Lys Trp His Lys Phe Ile Asp Thr Leu Thr Lys His Met Ser Glu Val Pro Val Ile Ser Ala Asp Gly Glu 3575

11089 GTA TAC ATA AGG AAA GGT CAG AGA GGC AGT GGG CAA CCT GAC ACQ AGC GCA GGC AAC AGC ATG TTG AAT GTG TTG ACA ATG GTG 11172  
3576 Val Tyr Ile Arg Lys Gly Gln Arg Gly Ser Gly Gln Pro Asp Thr Ser Ala Gly Asn Ser Met Leu Asn Val Leu Thr Met Val 3603

11173 TAT GCC TTC TGC GAG GCC AGG GTA CCC TAC AAG AGT TTT GAC AGA GTG GCA AAG ATC CAT GTC TGC GGG GAT GAT GGT TTC 11258  
3604 Tyr Ala Phe Cys Glu Ala Thr Gly Val Pro Tyr Lys Ser Phe Asp Arg Val Ala Lys Ile His Val Cys Gly Asp Asp Gly Phe 3631

11257 CTG ATT ACC GAA AGA GCT CTC GGT GAG AAA TTT GCG AGT AAA GGA GTC CAG ATC CTA TAC GAA GCT GGG AAG CCT CAA AAG ATC 11340  
3632 Leu Ile Thr Glu Arg Ala Leu Gly Glu Lys Phe Ala Ser Lys Gly Val Gln Ile Leu Tyr Glu Ala Gly Lys Pro Gln Lys Ile 3659  
11341 ACT GAA GGG GAC AAG ATG AAA GTA GCC TAT CAG TTT GAT GAT ATC GAG TTC TGC TCC CAT ACA CCA GTA CAA GTG AGG TGG TCA 11424  
3660 Thr Glu Gly Asp Lys Met Lys Val Ala Tyr Gln Phe Asp Asp Ile Glu Phe Cys Ser His Thr Pro Val Gln Val Arg Trp Ser 3687  
11425 GAC AAT ACT TCC AGC TAC ATG CCG GGA AGG AAC ACG ACT ACA ATC CTG GCT AAA ATG GCT ACA AGG TTG GAT TCC AGT GGT GAG 11508  
3688 Asp Asn Thr Ser Ser Tyr Met Pro Gly Arg Asn Thr Thr Ile Leu Ala Lys Met Ala Thr Arg Leu Asp Ser Ser Gly Glu 3715  
11509 AGG GGT ACT ATA GCA TAT GAG AAG GCA GTG GCG TTC AGC TTT TTG TTG ATG TAC TCC TCG AAC CCA CTG ATC AGA AGG ATA TGC 11592  
3716 Arg Gly Thr Ile Ala Tyr Glu Lys Ala Val Ala Phe Ser Phe Leu Leu Met Tyr Ser Trp Asn Pro Leu Ile Arg Arg Ile Cys 3743  
11593 TTA CTG GTG TTG TCA ACT GAG TTG CAA GTG AGA CCA GGG AAG TCA ACC ACC TAT TAC TAT GAA GGG GAC CCA ATA TCC GCT TAC 11676  
3744 Leu Leu Val Leu Ser Thr Glu Leu Gln Val Arg Pro Gly Lys Ser Thr Thr Tyr Tyr Glu Gly Asp Pro Ile Ser Ala Tyr 3771  
11677 AAG GAA GTC ATT GGC CAC AAT CTC TTT GAC CTT AAA AGA ACA AGC TTC GAA AAG CTA GCA AAG TTA AAT CTC AGC ATG TCC ACG 11760  
3772 Lys Glu Val Ile Gly His Asn Leu Phe Asp Leu Lys Arg Thr Ser Phe Glu Lys Leu Ala Lys Leu Asn Leu Ser Met Ser Thr 3799  
11761 CTC GGG GTG TGG ACT AGA CAC ACT AGC AAG AGA TTA CTA CAA GAT TGT GTC AAT GGT GGC ACC AAA GAG GGC AAC TGG CTG GTC 11844  
3800 Leu Gly Val Trp Thr Arg His Thr Ser Lys Arg Leu Leu Gln Asp Cys Val Asn Val Gly Thr Lys Glu Gly Asn Trp Leu Val 3827  
11845 AAT GCA GAC AGA CTA GTG AGT AGT AAG ACA GGA AAC AGG TAT ATA CCT GGA GAG GGC CAC ACC CTA CAA GGG AAA CAT TAT GAA 11928  
3828 Asn Ala Asp Arg Leu Val Ser Ser Lys Thr Gly Asn Arg Tyr Ile Pro Gly Glu Gly His Thr Leu Gln Gly Lys His Tyr Glu 3855  
11929 GAA CTG ATA CTA GCA AGG AAA CCG ATC GGT AAC TTT GAA GGG ACC GAT AGG TAT AAC TTG GCG CCA ATA GTC AAT GTA GTG TTG 12012  
3856 Glu Leu Ile Leu Ala Arg Lys Pro Ile Gly Asn Phe Glu Gly Thr Asp Arg Tyr Asn Leu Gly Pro Ile Val Asn Val Val Leu 3883  
12013 AGG AGA CTA AAA ATT ATG ATG GCG CTG ATA GGA AGG GGG GTG TGA GCA TGG TGG GCC CTT GAT CCG GCC CTA TCA GTA GAA 12096  
3884 Arg Arg Leu Lys Ile Met Met Met Ala Leu Ile Gly Arg Gly Val End 3899  
12097 CCC TAT TGT AAA TAA CAT TAA CTT ATT AAT TAT TTA GAT ACT ATT TAT TTA TTT ATT TAT TTA TTG AAT GAG CAA GTA CTG 12180  
12181 GTA CAA ACT ACC TCA TGT TAC CAC ACT ACA CTC ATT TTA ACA GCA CTT TAG CTG GAG GGA AAA CCC TGA COT CCA CAG TTG GAC 12264  
12265 TAA GGT AAT TTC CTA ACG GC 12284

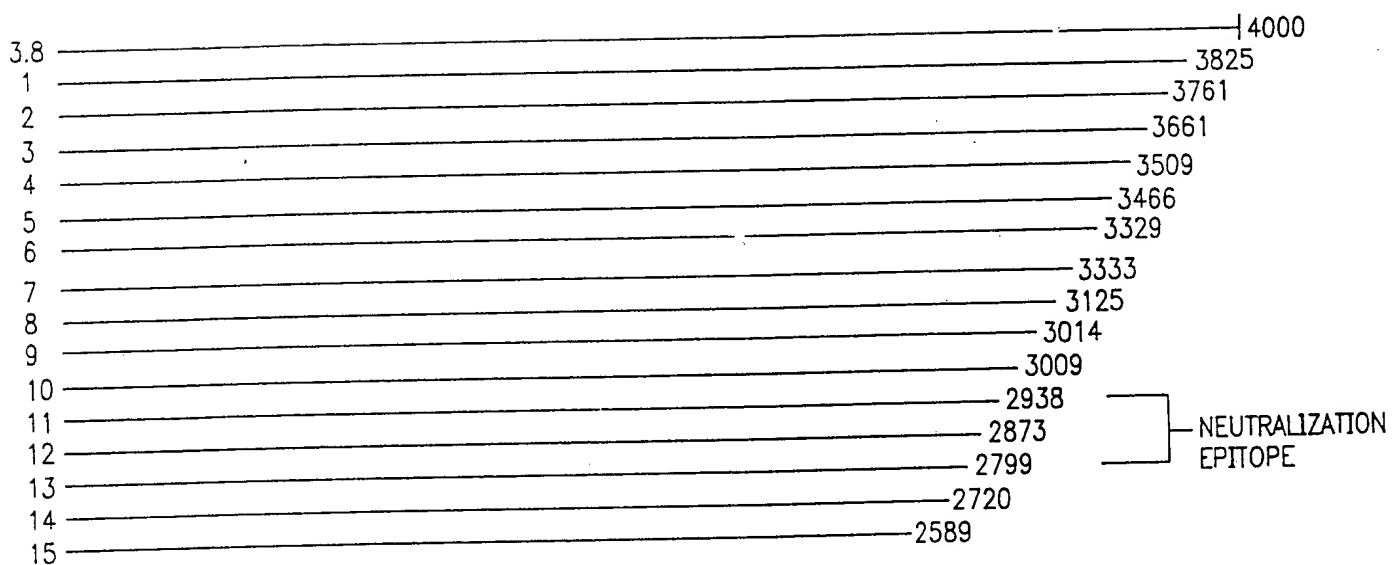


FIG. 2 (Formerly figure 4)

Figure 3. Nucleotide sequence.

HCV

AGTGACAACGGCACTAATGGTATTCAGCGAGCCATGTATCTTAGAGGGGTAAACAGG  
AGCTTACATGGGATCTGGCCCGAGAAAATATGCAAGGGGGTCCCCACTCATCTGGCC  
ACTGACACGGAACTGAAAGAGATACGCGGGATGATGGATGCCAGCGAGAGGACAAAC  
TATACGTGCTGTAGGTTACAAAGACATGAATGGAACAAACATGGATGGTGTAAGTGG  
TACAACATAGACCCTTGGATTTCAGTTAATGAACAGGACCCAAACAAATTTGACAGAA  
GGCCCTCCAGATAAG

Deduced amino acid sequence.

HCV    S D N G T N G I Q R A M Y L R G V N R S  
         L H G I W P E K I C K G V P T H L A T D  
         T E L K E I R G M M D A S E R T N Y T C  
         C R L Q R H E W N K H G W C N W Y N I D  
         P W I Q L M N R T Q T N L T E G P P D K

Figure 4

